Motorola SURFboard®

SB5101U / SB5101N DOCSIS 2.0 Cable Modem

Installation Guide

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Safety and Regulatory Information

SAFETY AND REGULATORY INFORMATION

IMPORTANT SAFETY INSTRUCTIONS — When using your equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all of the instructions listed here and/or in the user manual before you operate this device. Give particular attention to all safety precautions. Retain the instructions for future reference.
- This device must be installed and used in strict accordance with manufacturer's instructions, as described in the user documentation that is included with the device.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this device.
- To prevent fire or shock hazard, do not expose this device to rain or moisture. The device must not be exposed to dripping or splashing. Do not place objects filled with liquids, such as vases, on the device.
- This device was qualified under test conditions that included the use of the supplied cables between systems components. To ensure regulatory and safety compliance, use only the provided power and interface cables and install them properly.
- Different types of cord sets may be used for connections to the main supply circuit. Use only a main line cord that complies with all applicable device safety requirements of the country of use.
- Installation of this device must be in accordance with national wiring codes and conform to local regulations.
- Operate this device only from the type of power source indicated on the device's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords where they are attached to plugs and convenience receptacles, and examine the point where they exit from the device.
- Place this device in a location that is close enough to an electrical outlet to accommodate the length of the power cord.
- Place the device to allow for easy access when disconnecting the power cord of the device from the AC wall outlet.
- Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.
- Place this device on a stable surface.
- It is recommended that the customer install an AC surge protector in the AC outlet to which this device is connected. This is to avoid damaging the device by local lightning strikes and other electrical surges.
- Postpone installation until there is no risk of thunderstorm or lightning activity in the area.
- Do not cover the device or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.
- Wipe the device with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the device or use forced air to remove dust.
- Do not use this product near water: for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the device is in safe operating condition.

- Do not open the device. Do not perform any servicing other than that contained in the installation and troubleshooting instructions. Refer all servicing to qualified service personnel.
- This device should not be used in an environment that exceeds 40° C.

SAVE THESE INSTRUCTIONS

Note to CATV System Installer — This reminder is provided to call the CATV system installer's attention to Section 820.93 of the National Electric Code, which provides guidelines for proper grounding and, in particular, specifies that the Coaxial cable shield shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

FCC STATEMENTS

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION: Any changes or modifications not expressly approved by Motorola for compliance could void the user's authority to operate the equipment.

FCC DECLARATION OF CONFORMITY

Motorola Inc, 101 Tournament Drive, Horsham, PA 19044, 1-215-323-1000, declares that the SURFboard® SB5101 DOCSIS® 2.0 Cable Modem complies with 47 CFR Parts 2 and 15 of the FCC rules as a Class B digital device.

INDUSTRY CANADA (IC) STATEMENT

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

VOLUNTARY CONTROL COUNCIL FOR INTERFERENCE FROM INFORMATION TECHNOLOGY EQUIPMENT (VCCI)

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

INTERNATIONAL DECLARATION OF CONFORMITY

We,

Motorola, Inc.
101 Tournament Drive
Horsham, PA, U.S.A.

Declare under our sole responsibility that the

SB5101 series

To which the declaration relates is in conformity with the following standards:

EN 60950-1
EN 55022
EN 55024
EN 61000-3-2
EN 61000-3-3

The following provisions of the Directive(s) of the Council of the European Union:

EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC
Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC
Restriction of the Use of Certain Hazardous Substances in Electrical Equipment (RoHS) Directive 2002/95/EC

CARING FOR THE ENVIRONMENT BY RECYCLING

When you see this symbol on a Motorola product, do not dispose of the product with residential or commercial waste.

Recycling your Motorola Equipment

Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region. If collection systems are not available, call Motorola Customer Service for assistance. Please visit www.motorola.com/recycle for instructions on recycling.

1 Overview

Thank you for purchasing a Motorola SURFboard® product. Please take a few moments to become familiar with the product before starting the installation. To learn more about Motorola products, visit us at www.motorola.com.

Inside the Box

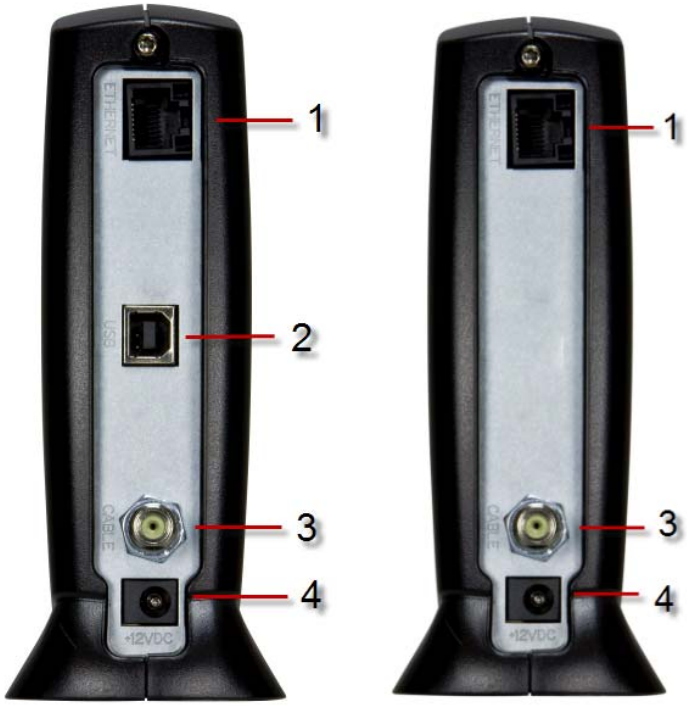
Before installing your Motorola SB5101U / SB5101N Digital Voice Modem, verify that the items listed below are in the box:

Items	
Power Supply	
Ethernet cable	
Installation CD-ROM (Provided with the *SB5101U only)*	
SB5101U / SB5101N Install Sheet	
Software License and Warranty Card	

SB5101U / SB5101N Front Panel

LED	When the LED is…	Then the modem is…
POWER	On (never flashes)	On
RECEIVE	• Flashing • ON (and not flashing)	• Scanning for a downstream channel • Connected to a downstream channel
SEND	• Flashing • ON (and not flashing)	• Scanning for a upstream channel • Connected to a upstream channel
ONLINE	• Flashing • ON (and not flashing)	• Scanning for a network connection • Online and the startup process is complete
PC/ACTIVITY	• Flashing • ON (and not flashing)	• Sending and/or receiving data • Connected to a PC

SB5101U and SB5101N Rear Panel



SB5101U **SB5101N**

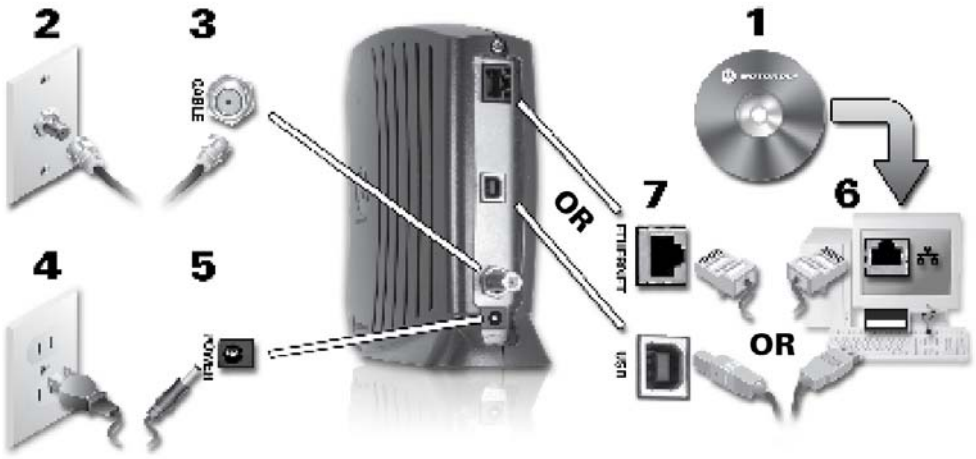
Key	Port	Description
1	ETHERNET	Connects to Ethernet-equipped devices
2	USB	Connects to USB-equipped devices
3	CABLE	Connects the modem to a cable wall outlet coaxial cable connection
4	POWER	Provides power to the cable modem

2 Getting Started

Cabling and Powering Up the Modem

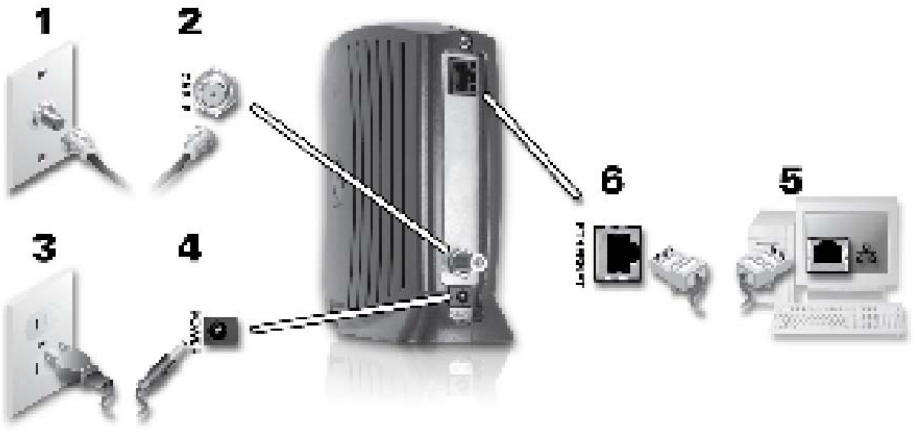
Cabling instructions for the SB5101U:

1. Insert the CDROM into your computer to load the USB driver.
2. Connect one end of the coaxial cable to the cable outlet.
3. Connect the other end of the coaxial cable to the cable connector on the modem.
4. Insert the power cord into the power port on the modem.
5. Plug the other end of the power cord into an electrical outlet.
6. Insert one end of the Ethernet **OR** USB cable to your computer.
7. Insert the other end of the Ethernet **OR** USB cable port on the modem.



Cabling instructions for the SB5101N:

1. Connect one end of the coaxial cable to the cable outlet.
2. Connect the other end of the coaxial cable to the cable connector on the modem.
3. Insert the power cord into the power port on the modem.
4. Plug the other end of the power cord into an electrical outlet.
5. Insert one end of the Ethernet cable to your computer.
6. Insert the other end of the Ethernet cable port on the modem.



Connecting to the Internet

After cabling and powering up the SB5101U / SB5101N, open a web browser, type in a web address to verify that you can connect to the Internet.

If you are unable to connect to the Internet, it may be necessary to restart your computer (please try this option first), change your settings, or reset your IP address.

Configuring TCP/IP in Windows XP

1. Click Start.
2. Click Control Panel.

- OR

3. Click **Network and Internet Connections / Network Connections** (will vary according to settings).
4. Click **LAN** or **High-Speed Internet connections**.
5. Select **Properties** from the drop-down menu. Be sure Internet Protocol (TCP/IP) is checked.
6. Select **Internet Protocol (TCP/IP)** and click **Properties**.
7. Verify that **Obtain an IP address automatically** and **Obtain DNS server address automatically** are selected.
8. Click **OK** to save the TCP/IP settings.
9. Click **OK** to exit the Local Area Connection Properties window.

Configuring TCP/IP in Windows Vista

1. Click **Start.**
2. Right click on **Network**.
3. Scroll down to **Properties.**
4. Click **Manage network connections.**
5. Right-click on the appropriate (if more than one listing) **Local Area Connection**.
6. Click **Properties**. Vista may prompt you for **permission to continue** – Click **Continue**.
7. Select **Internet Protocol Version4 (TCP/IPv4)** and click **Properties**.
8. Verify that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** options are selected.
9. Click **Advanced**. Use the table below to verify the **Advanced TCP/IP Settings**:

IP Settings Tab	DNS Tab	WINS Tab
• **DHCP Enabled** listed IP address box • **Default gateways** box is empty • **Automatic metric** is selected	• **DNS server addresses** box is empty • **Append primary and connection specific DNS suffixes** is selected • **Append parent suffixes of the primary DNS suffix** is checked • **Register this connection's addresses in DNS** is checked • **Append these DNS suffixes (in order)** is not selected	• **WINS addresses box** is empty • **Enable LMHOSTS lookup** is checked • **Default: Use NetBIOS setting from the DHCP server** is selected

10. Click **OK.**
11. Click **Alternate Configuration** and verify that **Automatic private IP address** is selected.
12. Click **OK.** Vista prompts you to restart your computer.

Verifying the IP Address for Windows XP or Windows Vista

Windows XP

1. Click **Start**.
2. Select **Run**.
3. Type **cmd** and click **OK.**
4. Type **ipconfig** and press **ENTER** to display your IP configuration.

Windows Vista

1. On the Windows Vista desktop, click **Start**.
5. Click **All Programs**.
6. Click **Accessories**.
7. Click **Run** to display the Run window.
8. Type **cmd** and click **OK** to open a command prompt window.
9. Type **ipconfig** and press **Enter** to display the IP Configuration.

If an **Autoconfiguration IP Address** appears, there is an incorrect connection between your PC and the digital voice modem (check the cable connections and your television service), or you may need to renew your IP address.

Renewing Your IP Address in Windows XP or Vista

1. Click **Start**.
2. Select **Run**.
3. Type **cmd** and click **OK**.
4. Type **ipconfig /renew** and press **ENTER**. If a valid IP address is displayed as shown, Internet access should be available.
5. Type **exit** and press **ENTER** to return to Windows.

If after performing this procedure your computer cannot access the Internet, call your cable provider for help.

A Software License and Warranty

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SURFboard SB5101U, SB5101N DOCSIS 2.0 Cable Modem
Motorola, Inc.
101 Tournament Drive, Horsham, PA 19044

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SURFboard SB5101U and SB5101N DOCSIS 2.0 Cable Modem

Motorola, Inc.,

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How long does this Limited Warranty last? Contact your Service Provider for details.

What you must do to obtain warranty service. For Product customer service, technical support, warranty claims, questions about your Internet service or connection, contact your Service Provider. ALL WARRANTIES ARE VOID IF THE PRODUCT IS OPENED, ALTERED, AND/OR DAMAGED.

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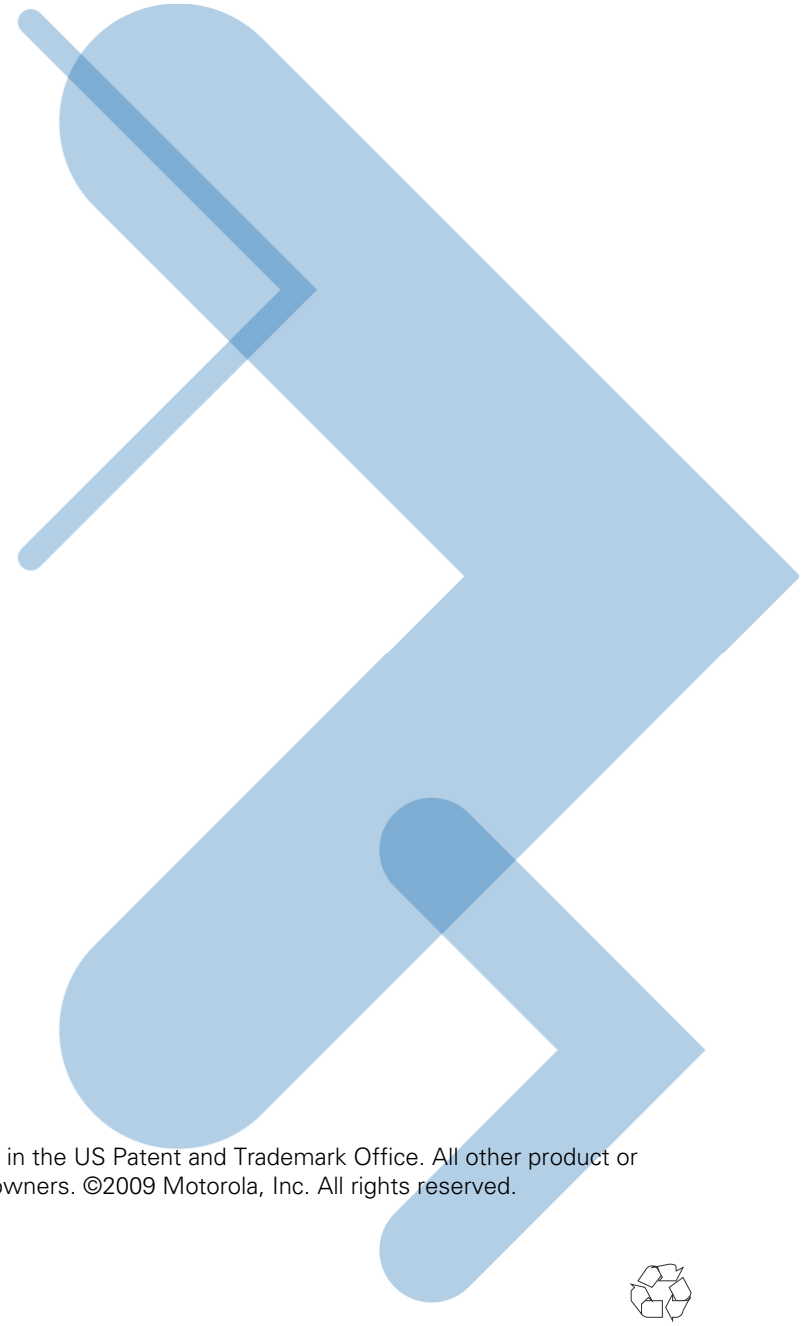

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